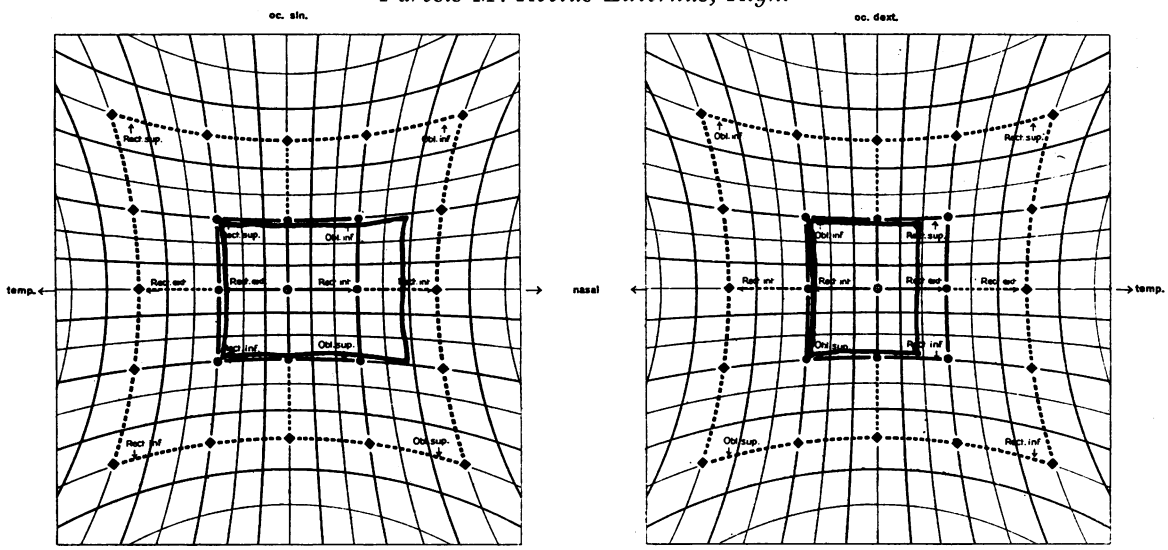
Paresis M. Rectus Externus, Right



Vitrum viride oculo sinistro praepositum. Vitrum viride oculo dextro praepositum.

THE HESS CURTAIN (OR COÖRDIMETER) AS AN AID IN THE DIAGNOSIS OF PALSIES OF THE EXTRINSIC OCULAR MUSCLES*

By DOHRMANN K. PISCHEL, M. D.
San Francisco

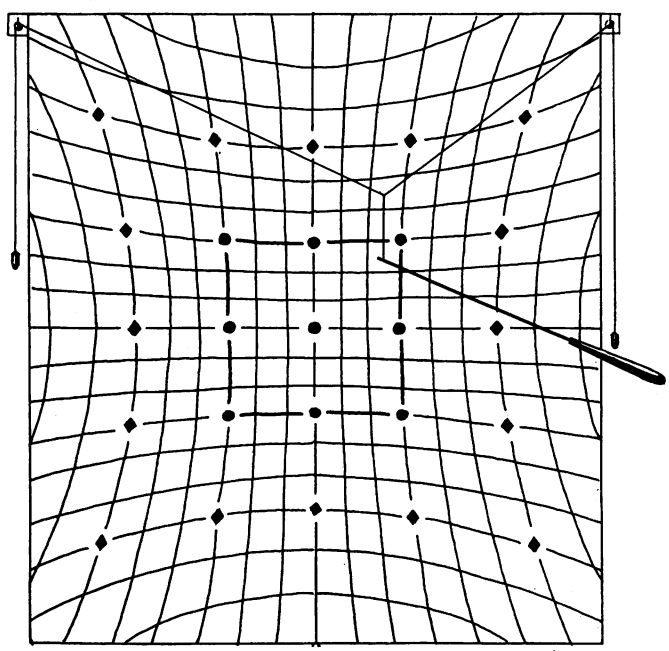
THAT the diagnosis of palsy of the extrinsic ocular muscles is troublesome is shown by the number of the methods employed in making this important diagnosis. Several types of apparatus have also been devised in this connection. The basic principle of all has been the differentiation of the images seen by the two eyes and the notation of the relation they bear to each other. The best known system is that of the lighted candle and colored glass held before the eye. In using this system the patient is called upon to state where and how far apart the images are—a truly difficult task in many cases. When the test is completed there is no accurate record of the result.

A system has been devised for the graphic recording of these results. With the patient sitting before a screen, the positions of the images are then projected on the screen, recorded, and can be transferred to paper for a permanent record. But, even with the positions of the images recorded, the diagnosis of which particular muscle is involved, is still to be made. For one working in a large clinic where these muscle palsies are frequently seen, the interpretation of these results is easy. Not so for the man in private practice.

GRAPHIC DIAGNOSIS OF INVOLVED MUSCLE—APPARATUS DEVISED BY PROFESSOR HESS

Several years ago Professor W. R. Hess at the Physiological Institute of the University of Zurich, devised an instrument which he calls a coördimeter, which not only allows the making of a graphic record of a palsy, but also practically diagnoses the muscle involved.

The apparatus consists of two parts: the first, of a black felt curtain and the second of spectacles with different colored lenses. The black felt curtain (Fig. 1) is marked off by fine red lines into rectangles, so drawn that they are 5 degrees apart if measured from a point 50 centimeters from the center of the curtain. At the intersection of the vertical and horizontal 15-degree lines, are placed round red spots. Similar spots are placed 15 degrees from the center on the vertical and horizontal meridian. These eight spots outline a square. In addition to the eight round red markers placed on the 15-degree lines there are eight additional square red markers placed on the 30-degree lines. These enable one, if one is so desirous, to make a test of the larger excursions of the eye. From the upper corner of the curtain



Curtain used in coördimeter of Prof. W. R. Hess.

* From the Department of Ophthalmology, University of California.

* Demonstration before the Eye, Ear, Nose and Throat Section, California Medical Association, at the Fifty-Sixth Annual Session, April 25-28, 1927.

are led two green threads to the loose ends of which are hung counterweights, while the other ends are joined together and fastened to a third thread coming from the end of a pointer. The junction of these threads makes a green Y and this Y is used as the point to be pulled around by means of the pointer to touch the various red marks.

The second part consists of a pair of spectacles with one lens green, of the identical shade of the green thread, and one lens red, identical with the red of the curtain marks. Through the green lens only the green thread can be seen; the red, the complementary color, appears as black and thus blends with the black of the curtain. Through the red lens, only the red spots can be seen. Thus the eye behind the red lens fixes, while the one behind the green can deviate without any stimulus to fusing of images.

In making the test in the case of paresis the eye behind the green lens deviates, so that what the patient actually does is to fixate with the one eye on a spot and then draw the green thread to the point on which the macula of the deviating eye is fixed. This point can be noted on a chart. Charts are furnished with two diagrams of the curtains on them, so that it is easy to enter the points. We use the left-hand one when the green glass is before the left eye, and the right-hand one when the green glass is before the right eye.

Having had the patient pull the green thread to all the spots with one eye fixing, we change the glasses and allow the other eye to fix, and repeat the tests. Then, on the charts, we join the marks with lines thus forming polygons. Given the size and shape of the polygons, and a few simple rules to follow, we can read off the name of the affected muscle.

Rules—The smaller polygon indicates the affected eye. The polygon shows a shrinking of the field in one area. In this area is printed the name of a muscle which is affected, and we read it off and the diagnosis is made.

Figure 2 shows a sample chart, with the points to which the thread has been pulled marked out. There is a loss of field in the right-hand diagram, and here can be read the name of the affected muscle, M. rectus externus dexter. The diagnosis is thus made.

In conclusion, I want to repeat that here we have a means of diagnosing paresis of the extrinsic ocular muscles which has the following important advantages. In the first place, it is accurate; in the second it is simple. It does not require the cooperation of an intelligent patient. It does not require an experienced operator. Therefore it can be readily used by the physician who does not confine himself to eye work alone. And in the third place it gives an accurate permanent graphic record. Thus when we repeat the tests at intervals to see whether the paresis is improving, remaining stationary, or increasing, we have an accurate graphic record for comparison. This last is a most important feature.

This curtain can be obtained from the mechanic of the Physiological Institute at Zurich, Switzerland, and will be mailed on receipt of $14.

490 Post Street.

MUCOCELE OF THE APPENDIX*

WITH REPORT OF TWO CASES

By DON D. WEAVER, M. D.
Oakland

I WISH to report these two cases of mucocele of the appendix because of the extreme rarity of the condition.

CASE 1—Male; Japanese; age 30. Was first seen August 9, 1924, suffering from a dull aching pain in the right lower abdomen. Family and past history negative. Present trouble began about six years previous, with the same dull pain in the right iliac region. Pain has been recurrent at intervals until the present time. Pain and tenderness on pressure had increased during the preceding forty-eight hours so that the patient had been unable to sleep at night. Pain was made worse by exercise. History was otherwise negative.

Physical examination negative except in region of the appendix where there was marked tenderness on pressure, and a localized area of muscle rigidity. White blood count, 9400. Diagnosis: Subacute appendicitis.

Patient was operated upon at Oakland Central Hospital August 9, 1924. Under nitrous oxid and ether anesthesia the appendix was removed. The only point of interest in the operation was the enlarged appearance of the appendix. It appeared as a sausage-shaped cystic tumor about 9 cm. long by 2 cm. in diameter, and was attached to the cecum by a short cord-like pedicle about one-half cm. long. The serosa had reddened vessels markedly injected. The appendix was tensely distended and translucent when held to the light and was filled with clear liquid mucus. A few drops of pus had settled in one pole.

Pathological Report by Dr. Gertrude Moore—The specimen submitted is an appendix 8 cm. in length by 2 cm. in diameter. The organ has the general appearance of a well-distended sausage. The surface is smooth and glistening. The walls are 2 mm. thick. The cavity is distended with a clear, tenacious mucus. The lining membrane which lines the cystic cavity completely cuts off the outlet to the cecum. Microscopic examination shows the wall to be made up of an outer coat of flattened epithelial cells upon a fibrous connective tissue supporting structure with the greater portion of the wall consisting of fibrous connective tissue and a few non-striped muscle cells. The cells are of a type considerably lower than those usually found in this organ. Diagnosis: Mucocele of the appendix.

CASE 2—Mrs. C., age 43; height, 5 feet 5 inches; weight, 165 pounds. Came under observation in November, 1926, suffering from recurrent severe febrile attacks of an unusual nature but which I think have no relation to the condition here reported. History otherwise negative.

Physical Examination—The head, neck, chest, and upper abdomen were negative. Lower abdomen: In the midline of the lower abdomen a firm rounded tumor mass was felt which gave the impression of a three months' pregnant uterus. Apparently attached to the upper pole of this mass an elongated, firm tumor was felt extending upward and into the right iliac fossa. This mass was freely movable. Vaginal examination: The vulva presented a discharging sinus from an old Bartholinic abscess. Perineum normal but bathed in mucopurulent discharge. Cervix large and hard; marked endocervicitis with erosion. Bimanual examination revealed the uterus enlarged to the size of a four months' pregnancy; very hard to the touch but apparently not nodular; firmly fixed in the pelvis. An elongated firm mass which was freely movable was felt extending upward into the right iliac

* Read before the Fabiola Hospital Staff, Oakland, August 30. 1927.